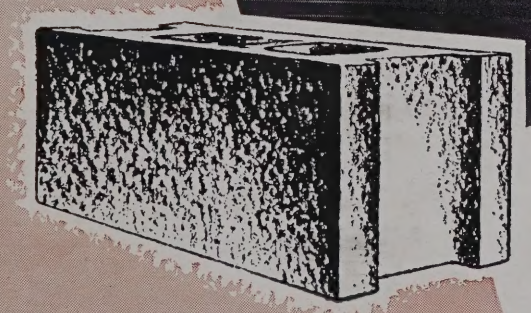
A.I.A. File No. 10-C

CONCRETE MASONRY



IN CHURCH CONSTRUCTION

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THE term "concrete masonry" is applied to machine-made block, brick or tile building units molded from concrete and laid by masons in a wall. The concrete is made by mixing portland cement with water and such materials as sand, pebbles, crushed stone, cinders, slag, burned shale, clay, pumice, or other suitable aggregates.

Concrete masonry needs little introduction in the construction field. High fire-resistance, economy, durability, and beauty are only a few of its many qualities which have long been recognized by leading architects, builders, and owners. The purpose of this booklet, however, is to present a few significant facts concerning the use of concrete masonry units in church construction.

Probably one of the most important things to consider in building a church is the selection of a high sound-absorptive material. The value of concrete masonry in this respect has been vividly demonstrated in hundreds of churches where it has been employed. Tests made at the University of Illinois showed that even units made with dense aggregates of low porosity (such as sand and gravel) are much more sound-absorbent than the usual hard plasters. Units made with lightweight aggregates have an extremely high acoustical rating because of their porous, open texture. A sound absorption of 15 per cent or more is considered to be a useful acoustical aid for any material. Concrete masonry made with sand and gravel or other heavy aggregates absorb 21 to 27 per cent; units made with lightweight aggregates absorb about 50 per cent.

Other advantages in using concrete masonry units for church construction are described on the following pages.

Cover picture—Nardin Park M. E. Church, Detroit, Mich.
Architect: Andrew R. Morison, Detroit, Mich.

Right—Trinity Church, Chicago, Ill.
Architect: Ralph Stoetzel, Chicago, Ill.

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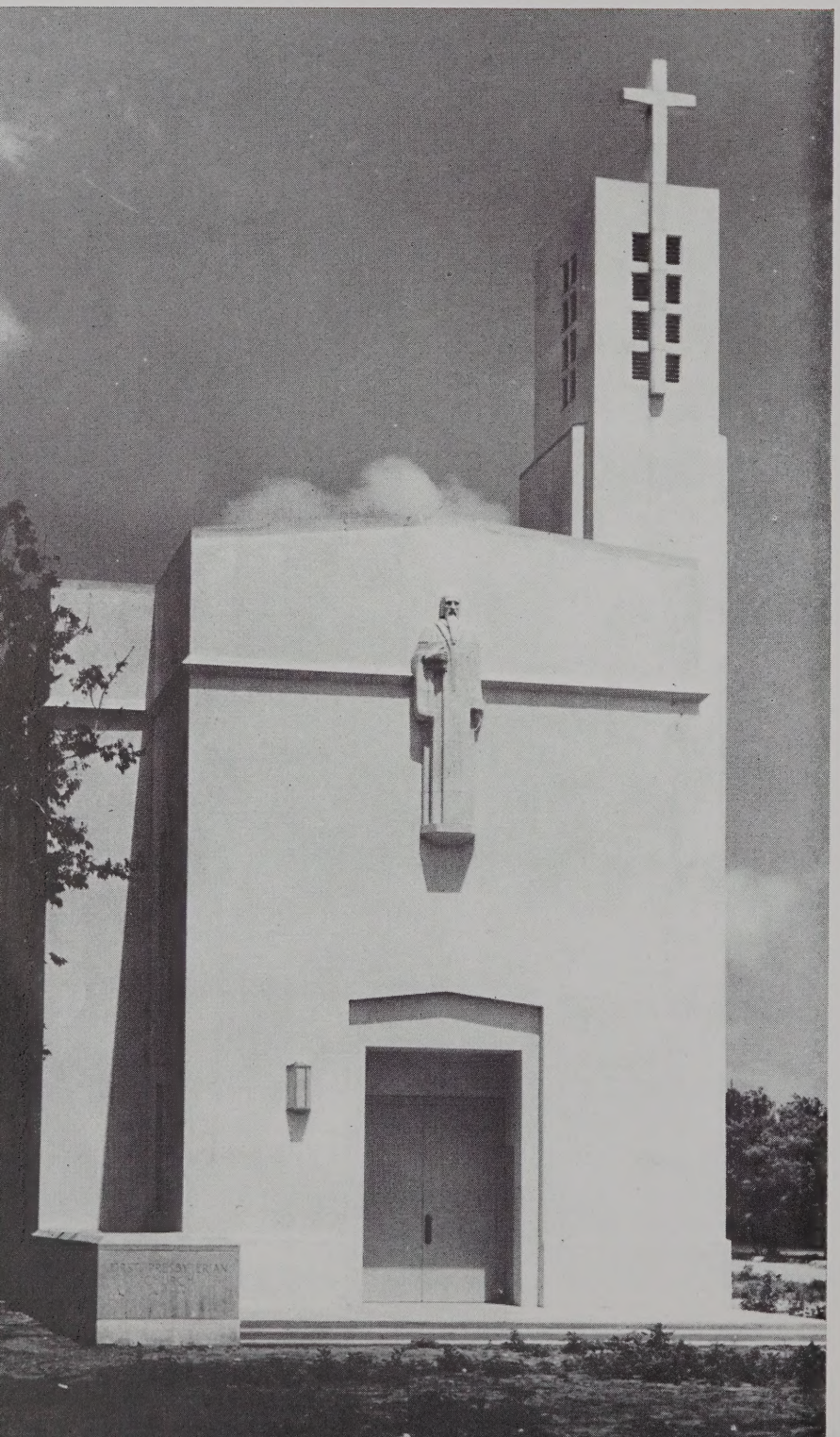
SIMPLICITY



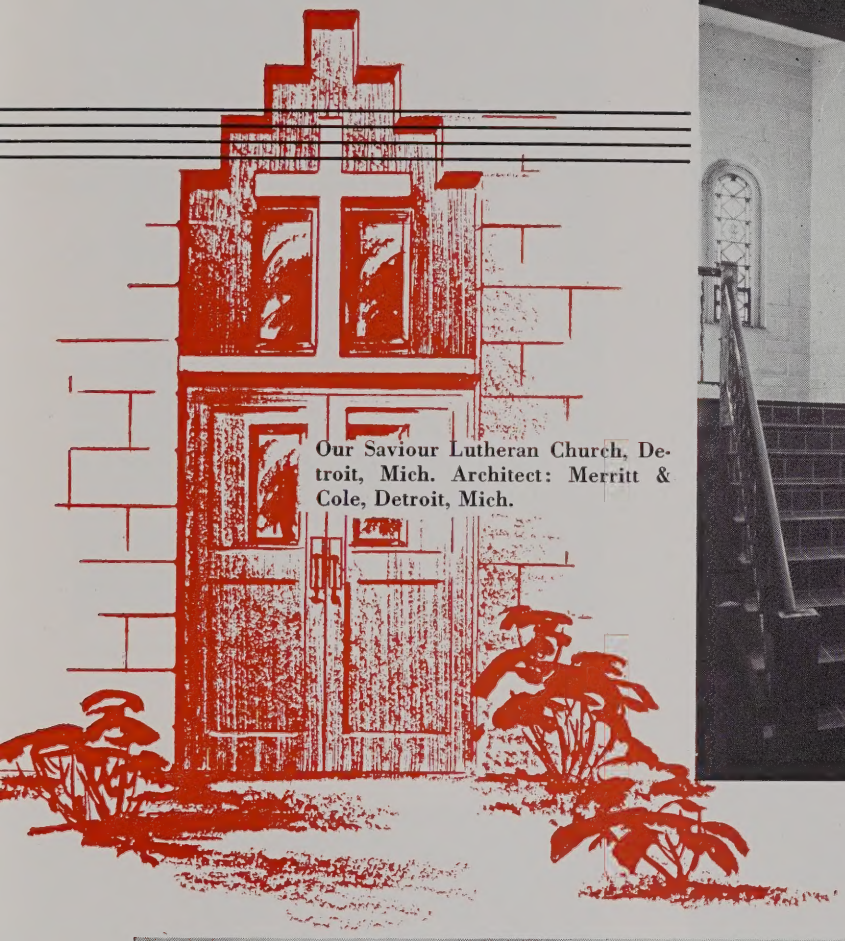
THE decorative beauty of concrete masonry, with its many textures, shapes and colors, lends an atmosphere of simple dignity to any type of construction. This is an especially important consideration in the building of churches where embellishments and ornate decorations have long been frowned upon. Through the use of concrete masonry, a designer can achieve this effect of simplicity and yet realize the other benefits of this building medium in a church that is durable, economical, beautiful and acoustically superior.

Note the sharp, precise lines of the Fourth Presbyterian Church of Raymondville, Texas (left). The broad sweep of spick-and-span whiteness, which this church has obtained through the use of concrete masonry, is exemplary of ecclesiastical simplicity.

The Our Saviour Lutheran Church of Detroit (upper right) has been built with exposed lightweight units throughout. The alternate courses of 4-inch and 8-inch high units are combined to produce a wall rich in texture and pleasing in pattern.

The St. Matthew Lutheran Church of Portland, Oregon (lower right) is unique in that it was designed by its pastor, Rev. Werner J. Fritz. The structure, built with a cavity wall of 8-inch and 3-inch block thicknesses, makes excellent use of exposed units on both exterior and interior surfaces.

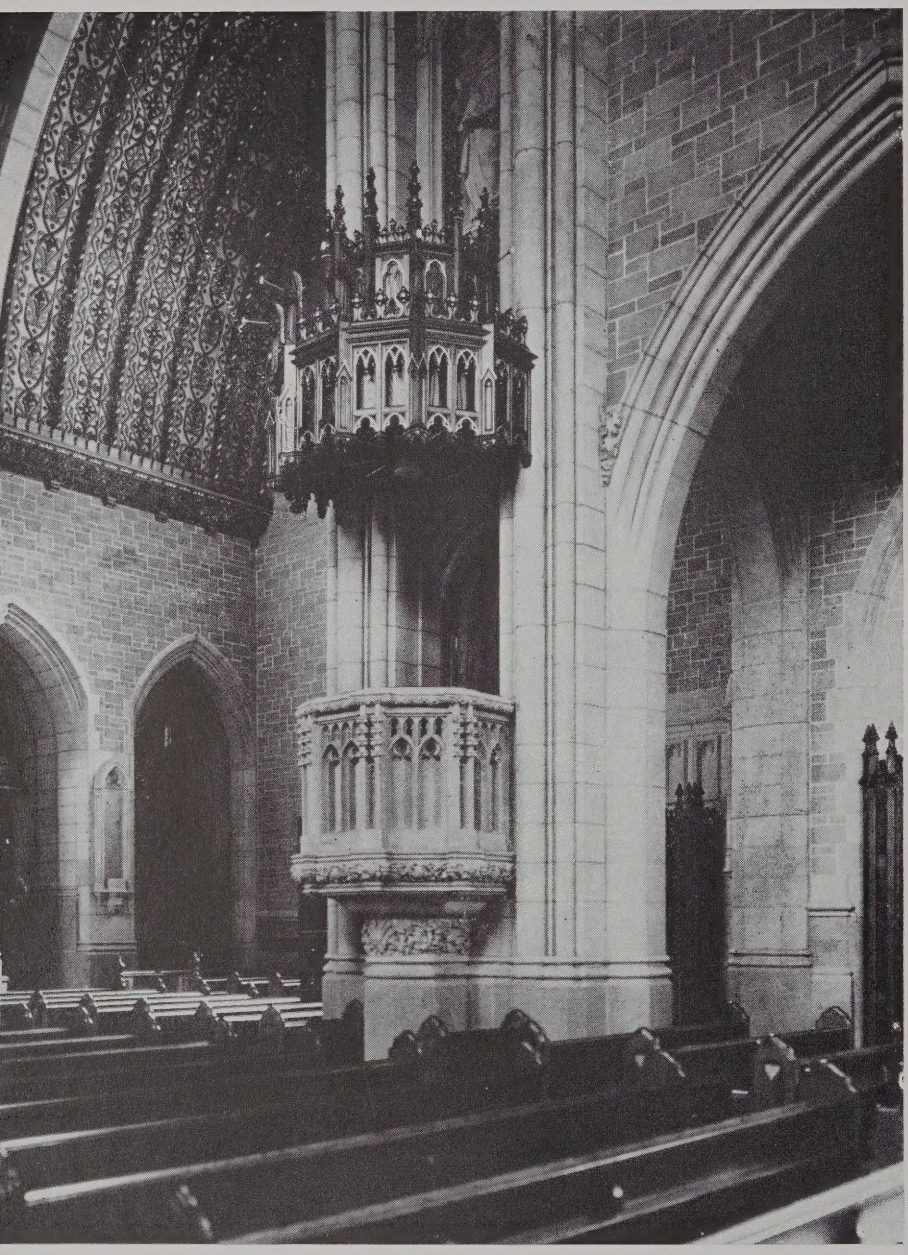
First Presbyterian Church, Raymondville, Texas.
Architect: Henry Steinbomer, San Antonio, Texas.



Our Saviour Lutheran Church, Detroit, Mich. Architect: Merritt & Cole, Detroit, Mich.

St. Matthew Lutheran Church, Portland, Oregon.
Designed by: Rev. Werner J. Fritz, Portland, Ore.

Valleyfield Cathedral, Valleyfield, Que., Canada. Designed by: Henri S. Labelle in collaboration with J. M. Lafleur and J. E. Perron, associates, and Louis N. Audet, consulting architect, Montreal, Quebec.



CONCRETE masonry, if used in the correct manner, will withstand long years of hard usage in all types of climatic conditions. The tremendous strength of this building medium has been vividly demonstrated in numerous tests. It was shown during tests conducted at the University of Illinois that concrete masonry walls provide a factor of safety from 4 to 9 times the maximum loading permitted in building codes.

Just as important is the element of fire resistance which concrete masonry walls provide. Concrete masonry units meeting standard requirements for walls having 2-hour, 3-hour and 4-hour fire ratings are available in all sections of the country.

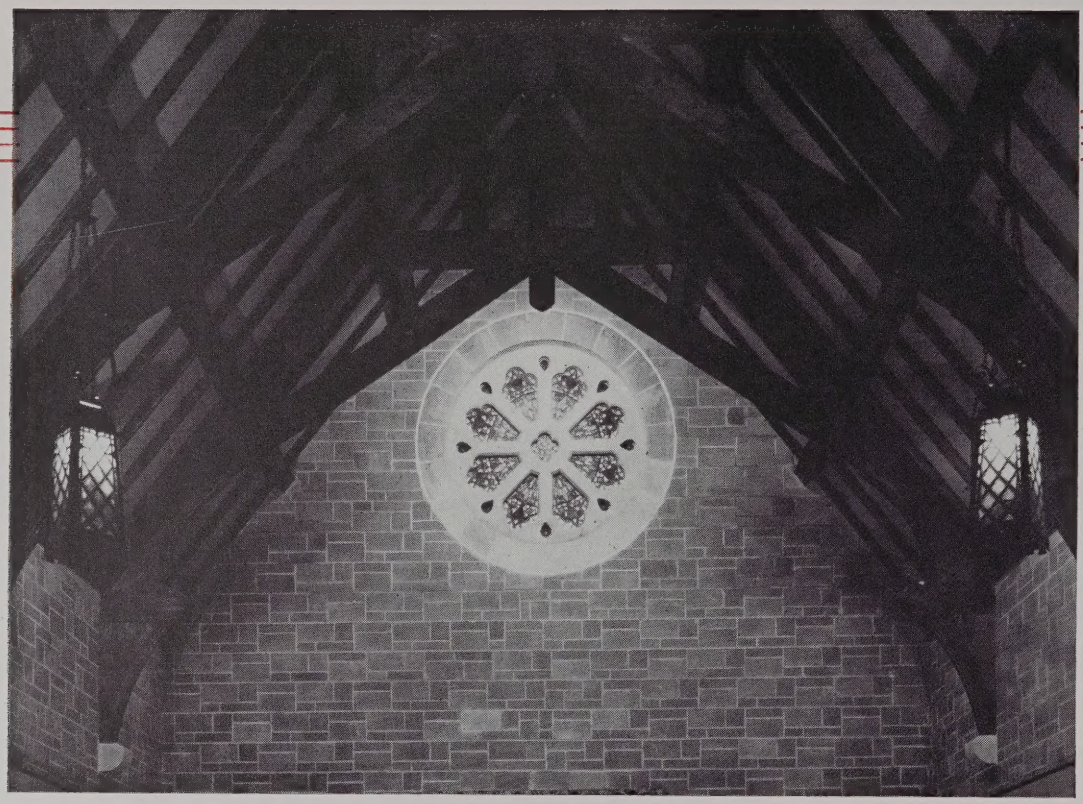
The Valleyfield Cathedral at Quebec, Canada (left) is an outstanding example of a church that is not only beautiful but enduring as well. Random and coursed ashlar combined with cast stone produce exceptionally pleasing wall areas.

PERMANENCE

St. John DeNepomuc Church, Milwaukee, Wis.
Architect: Henry R. Slaby, Milwaukee, Wis.

Our Lady of Solitude Church, Palm Springs, Calif. Architect: Albert C. Martin, Los Angeles, Calif.

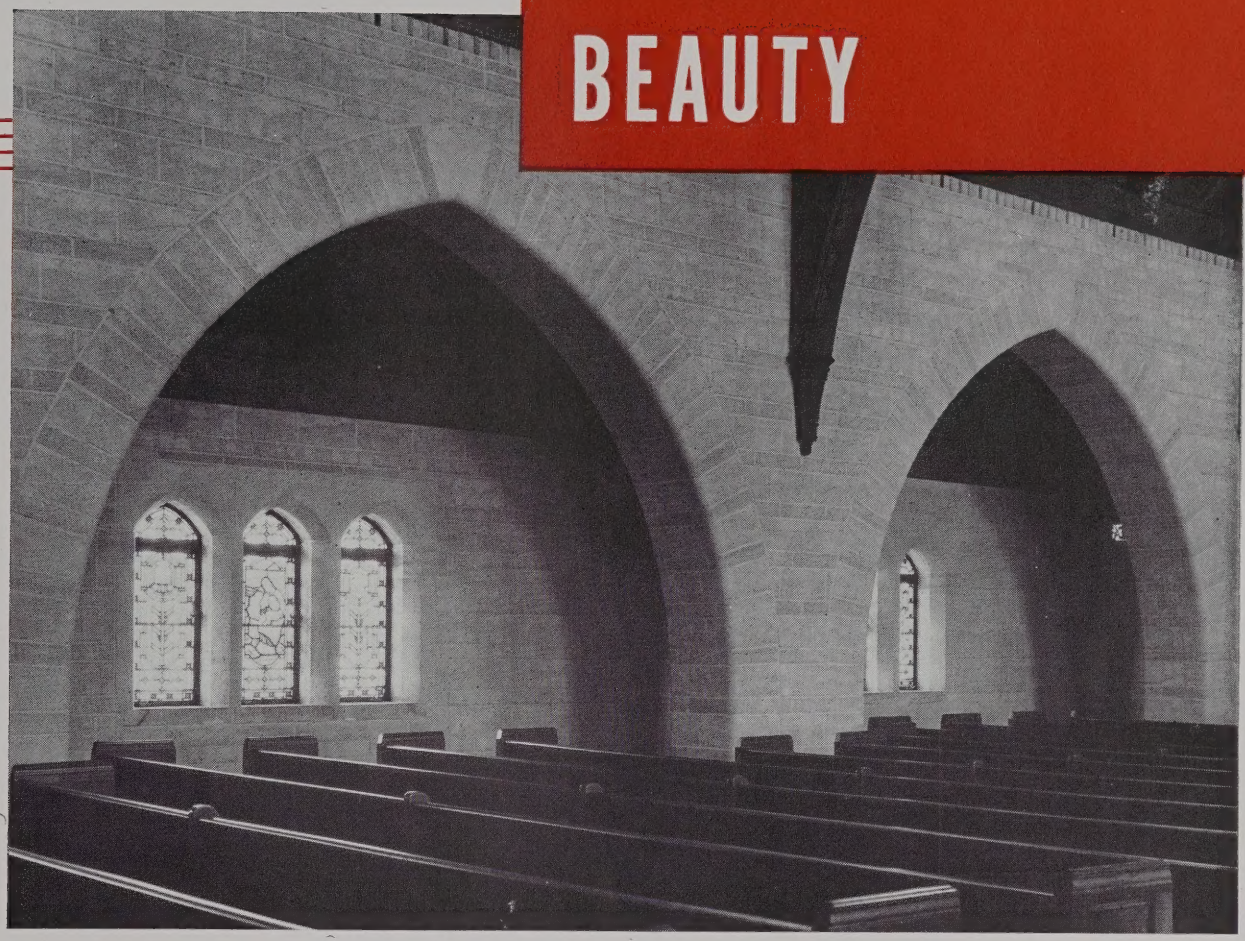
Architect: Charles B. Zalesky, Cedar Rapids, Iowa.
Church of the Brethren, Cedar Rapids, Iowa.



Flossmoor Community Church, Flossmoor Park, Ill.
Architect: Hugo C. Haeuser, Milwaukee, Wis.

Jewish Center of Hyde Park, Chicago, Ill.
Architect: Casriel Halperin & Assoc., Chicago, Ill.

BEAUTY



Peace Lutheran Church, Detroit, Mich. Architect: N. Chester-Sorensen Co., Detroit, Mich.

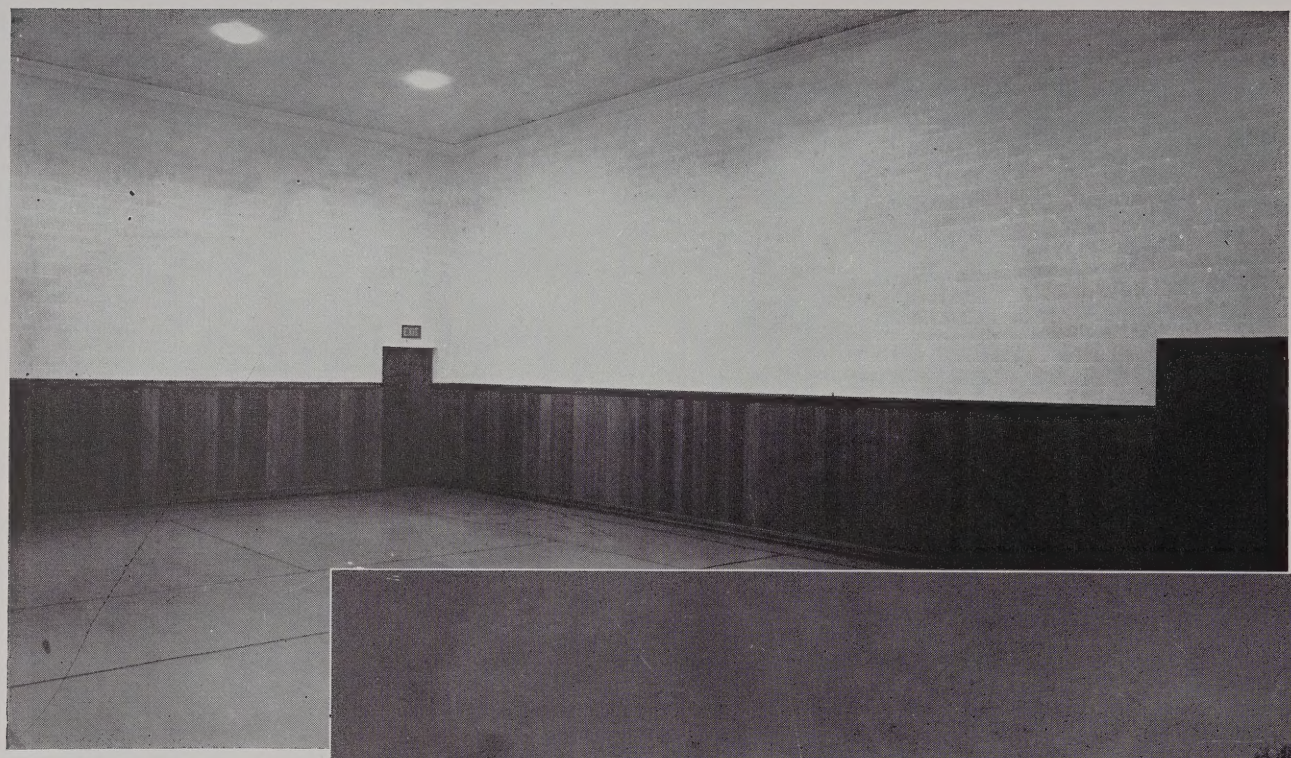
CONCRETE masonry is not only a structural, but an architectural material as well. A surprisingly large number of pleasing effects can be obtained by varying treatment of joints and choice of texture with standard units of a single size only. The use of concrete masonry ashlar walls has become increasingly popular, especially in church construction.

Ashlar walls are built with one or more sizes of concrete masonry units combined to form interesting and attractive patterns. There are two types of ashlar patterns—coursed ashlar has continuous horizontal joints, whereas random ashlar has neither continuous horizontal or vertical joints.

Note the pleasing, soft effect obtained in the coursed ashlar walls of the Flossmoor Community Church (upper left). Beautiful interiors such as this can easily be obtained with concrete masonry. All that is required is the imagination of the designer and a knowledge of the many ways in which concrete masonry can be used most effectively.

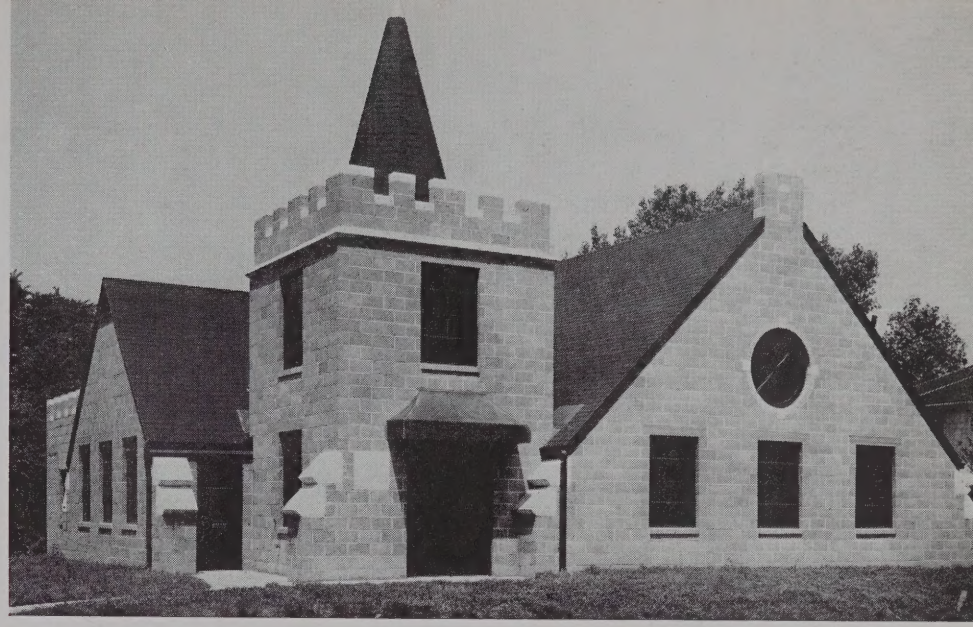
The walls of the Jewish Center of Hyde Park (lower left) are built with blocks in a coursed ashlar pattern. The lightweight units used in the interior of this beautiful structure are all of same dimensions and scored to produce the effect of using units of two different heights.

One has only to step for a brief moment into the Peace Lutheran Church of Detroit (above) in order to become aware of the beauty which its walls contain. The ingenuity of its designer has produced here, with the aid of exposed masonry, an effect of serenity that identifies this structure as truly a place of worship.

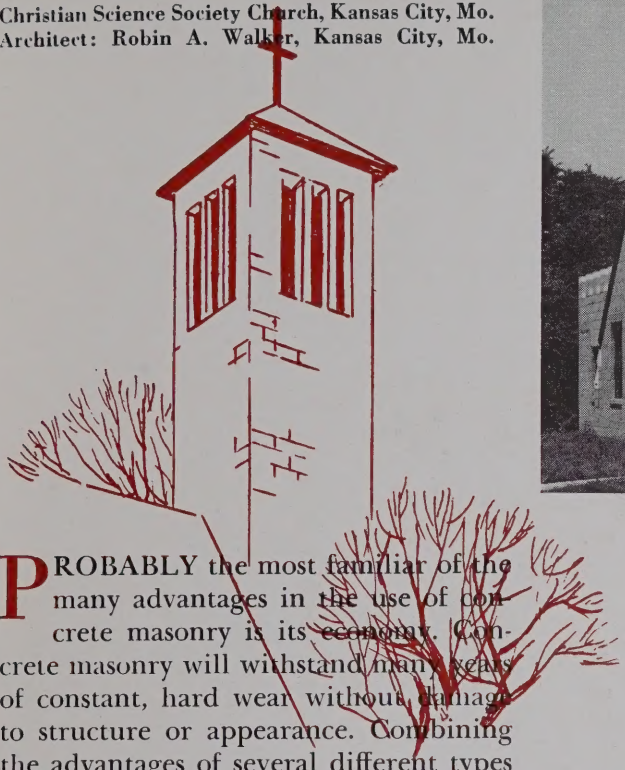


Trinity M. E. Church, Youngstown, Ohio. Architect: Myron E. Goodwin, Youngstown, Ohio.

St. Luke's Episcopal Church, Calistoga, Calif. Designed by: Church Board and Walter S. Bickford, Contractor.



Christian Science Society Church, Kansas City, Mo.
Architect: Robin A. Walker, Kansas City, Mo.



PROBABLY the most familiar of the many advantages in the use of concrete masonry is its economy. Concrete masonry will withstand many years of constant, hard wear without damage to structure or appearance. Combining the advantages of several different types of building materials, it enables the designer to produce a structure at a considerable savings in cost when compared to the use of other types of construction. If it is desired to build a church that is firesafe, economical and beautiful as well, then concrete masonry will more than fit these needs at an extremely low cost. The skill of the designer and builder will do the rest.

Look, for example, at the large expanse of wall in the rumpus room of the Trinity M. E. Church in Youngstown, Ohio (upper left). Lightweight units were chosen for this room because they would provide walls that would absorb the sound without the need of expensive supplementary acoustical treatment.

The less frequently used specials such as arches, rounded and offset corners are available on order at low cost. These special features of concrete masonry have made it extremely adaptable for church construction everywhere.

All Saints Episcopal Church, Edgewood, Ala.
Architect: Charles H. McCauley, Birmingham, Ala.

ECONOMY

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